

Building a Community That Works

An EPA Climate Showcase Communities Project
Presented by Liz Walker & Ed Marx



United States
Environmental Protection
Agency

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Rethinking Our Homes, Rethinking Our Communities

Environmental Impacts



Physical Health

Conventional homes



Emotional Health



Sustainability

green building

Support transit

preserve land

Reduce, reuse, recycle

Cluster housing

Alternative energy

Car and ride sharing

Local food

Social support systems

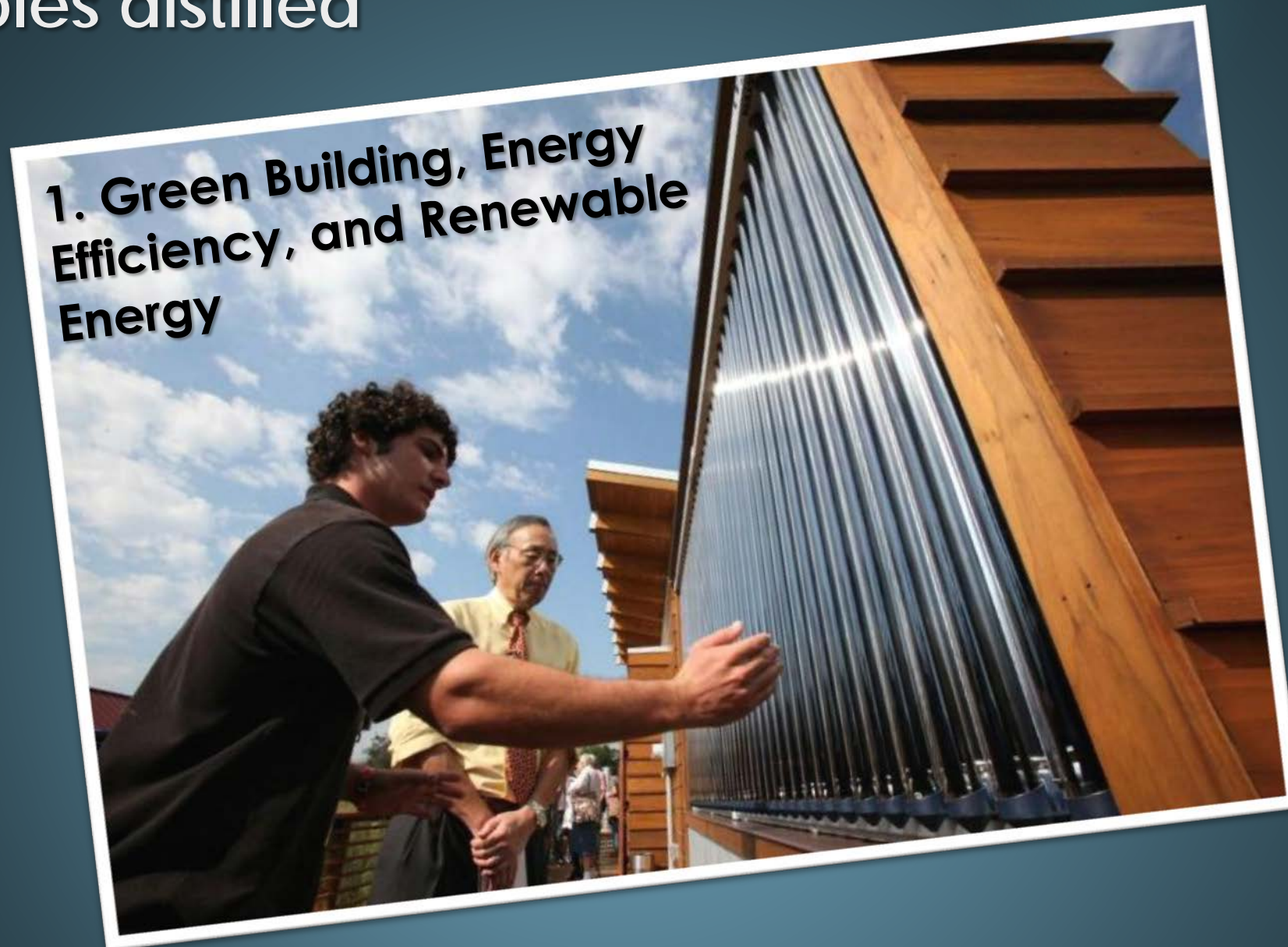
Increase density



A Model That Works

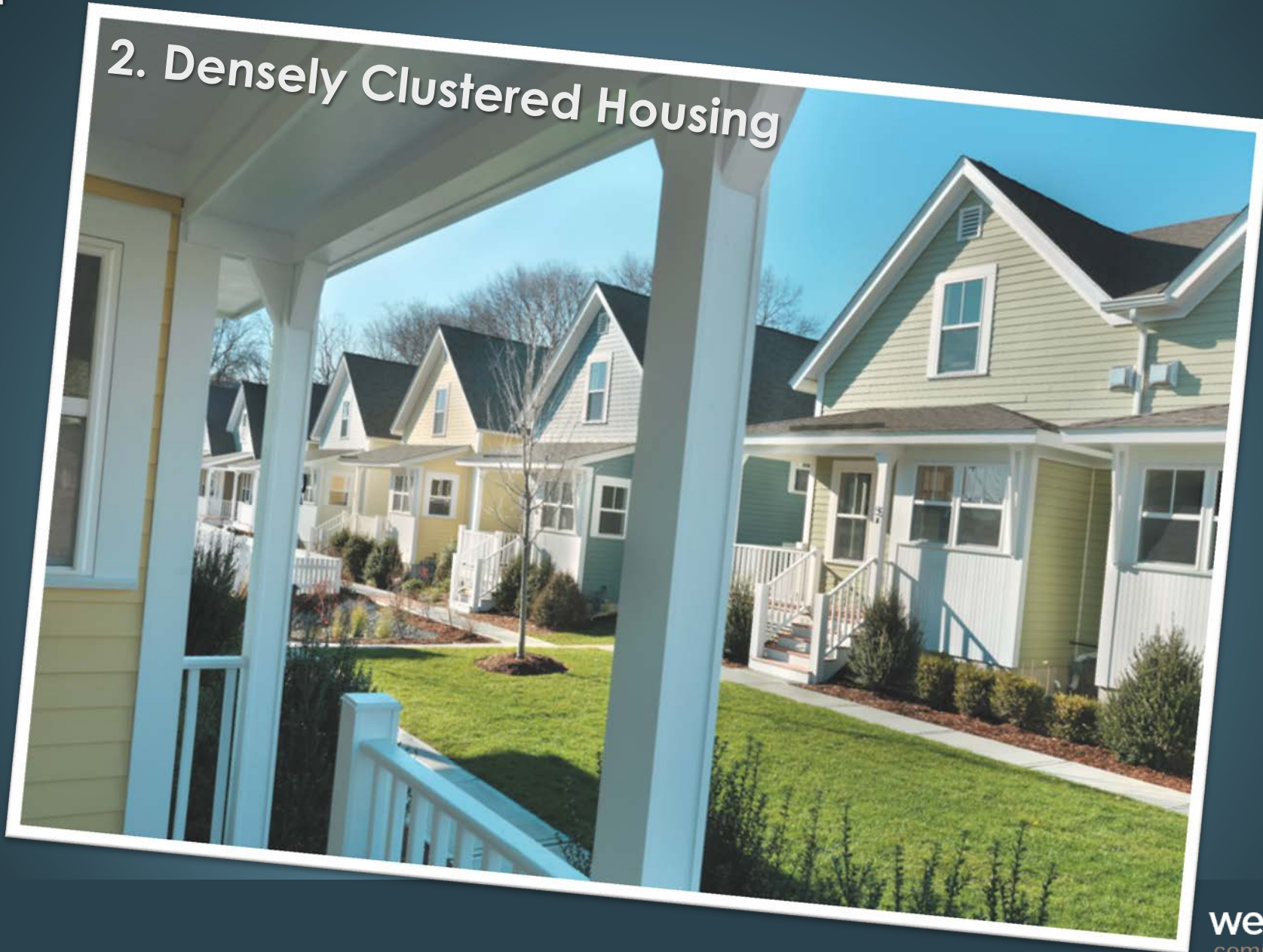


10 Principles distilled



10 Principles distilled

2. Densely Clustered Housing



10 Principles distilled



3. Modeling Low Resource Use



10 Principles distilled

4. Strong Social Ties



10 Principles distilled

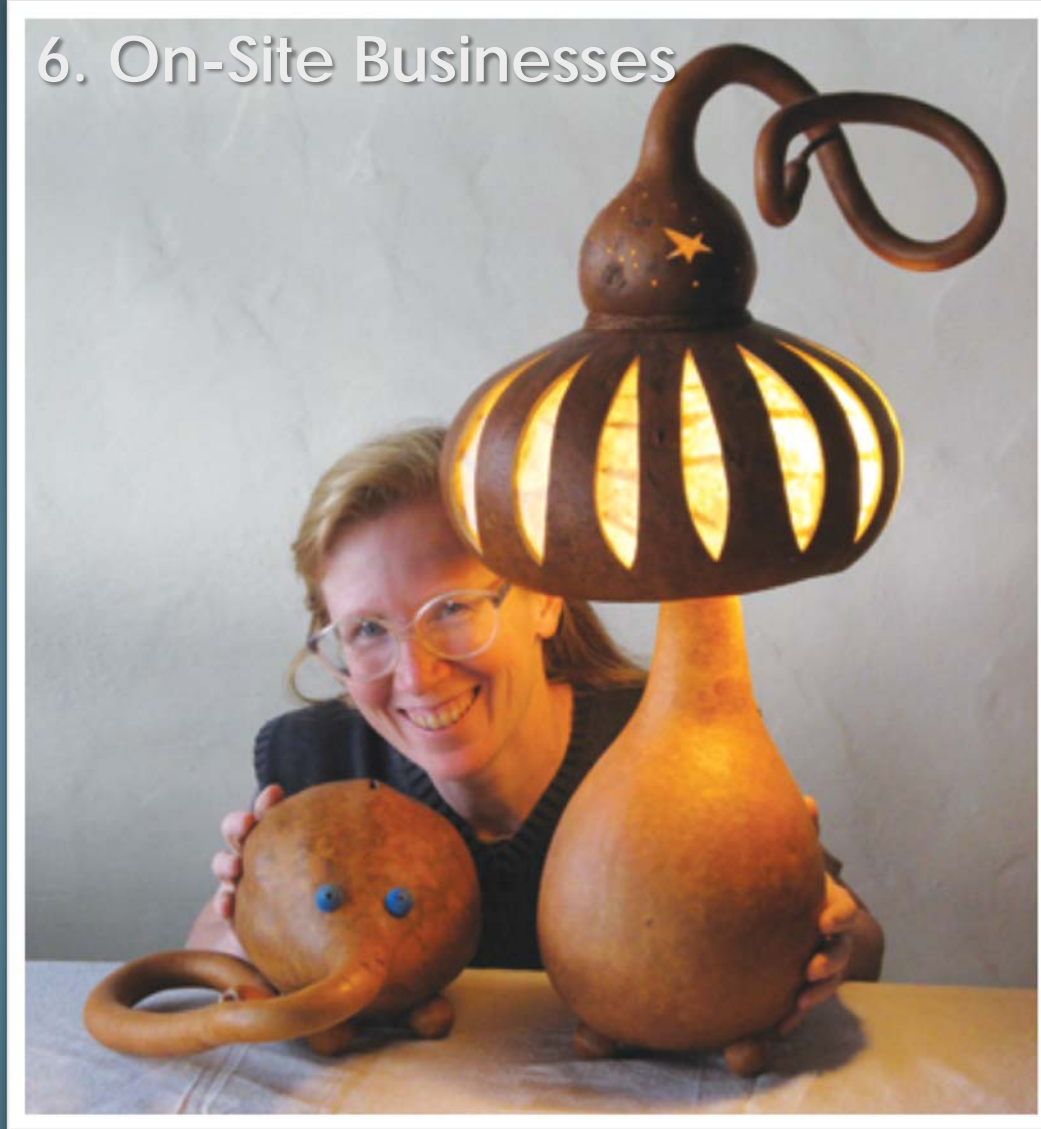


5. Local Food Production



10 Principles distilled

6. On-Site Businesses



10 Principles distilled



10 Principles distilled



8. Affordable, Accessible



10 Principles distilled



9. Open Space Preservation



10 Principles distilled



10. Hands on Education



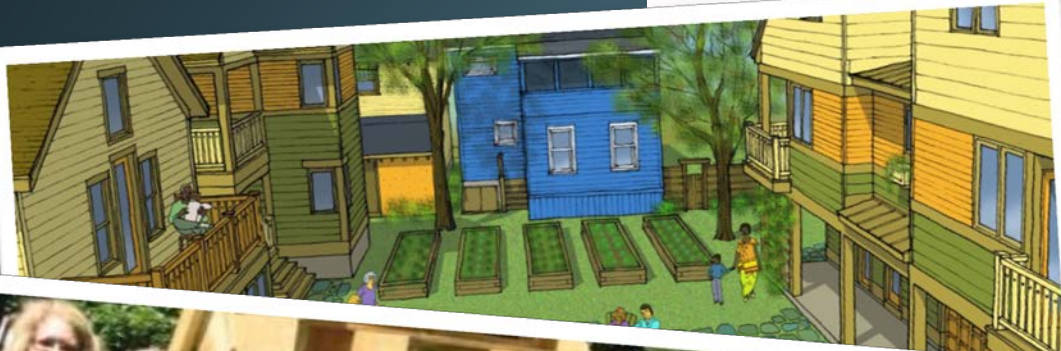
Success Story #1



TREE Third Residential Neighborhood Experience - EcoVillage at Ithaca



Success Story #2



Aurora Pocket Neighborhood

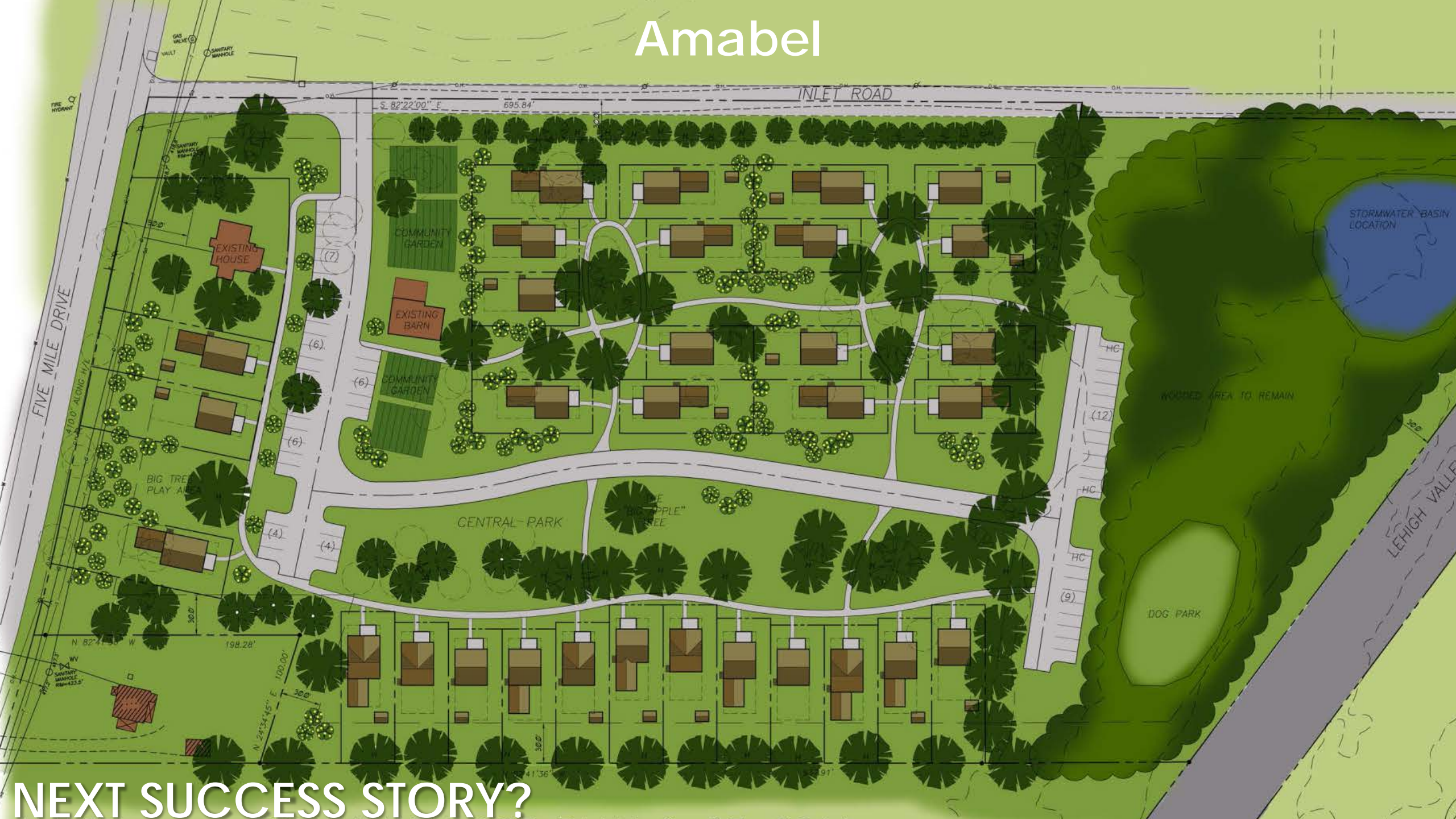
Success Story #3



Cayuga Townhomes

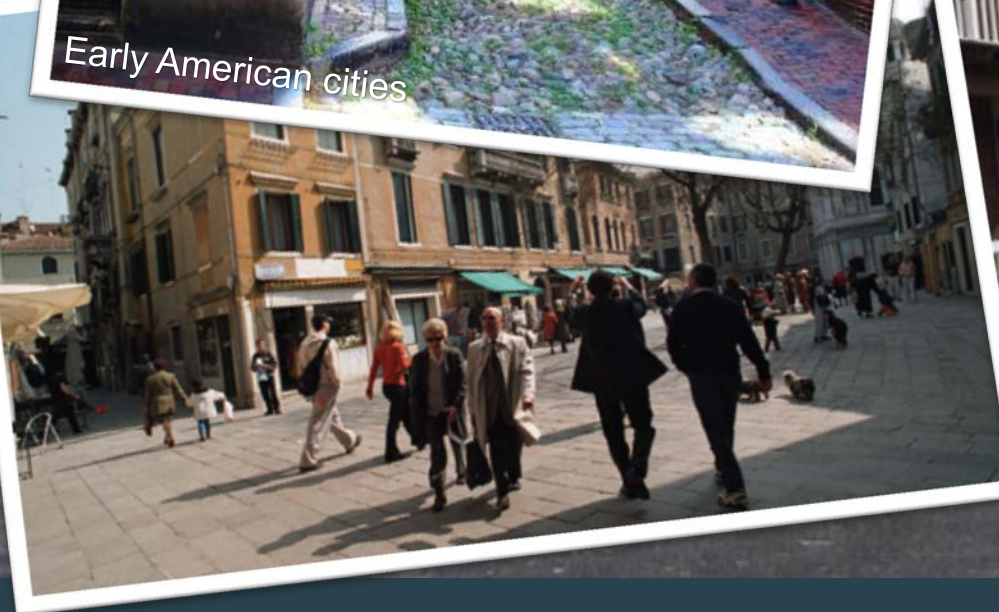
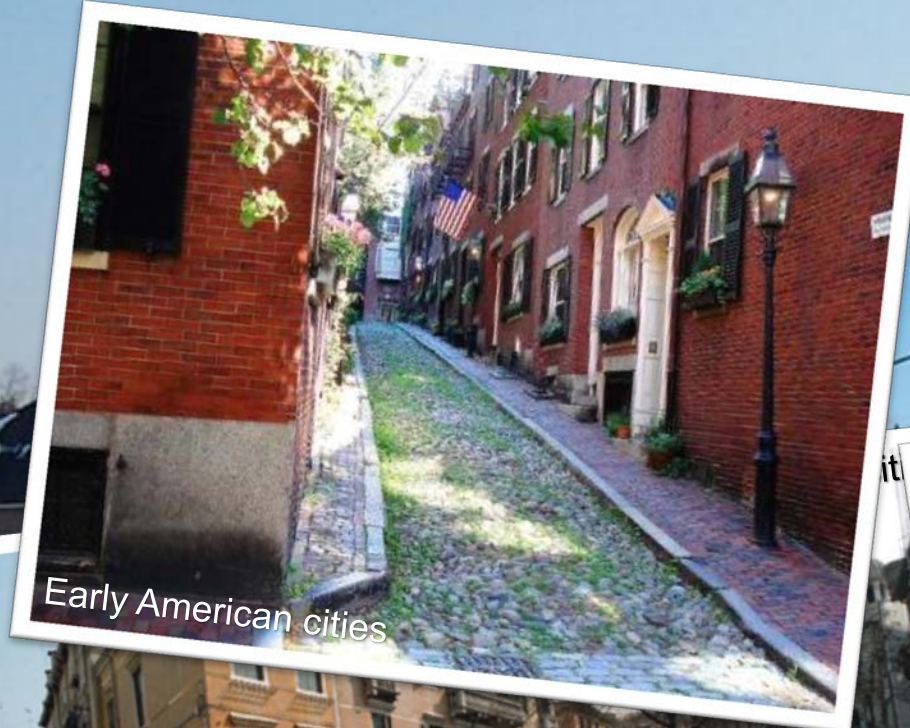


Amabel



NEXT SUCCESS STORY?

Pedestrian Neighborhood Zoning



PNZ Objectives



3. Promote closer social ties



2. Preserve open space



1. Increase density to support transit and walkability



PNZ Key Strategies

Walkable Neighborhoods

Shared outdoor space

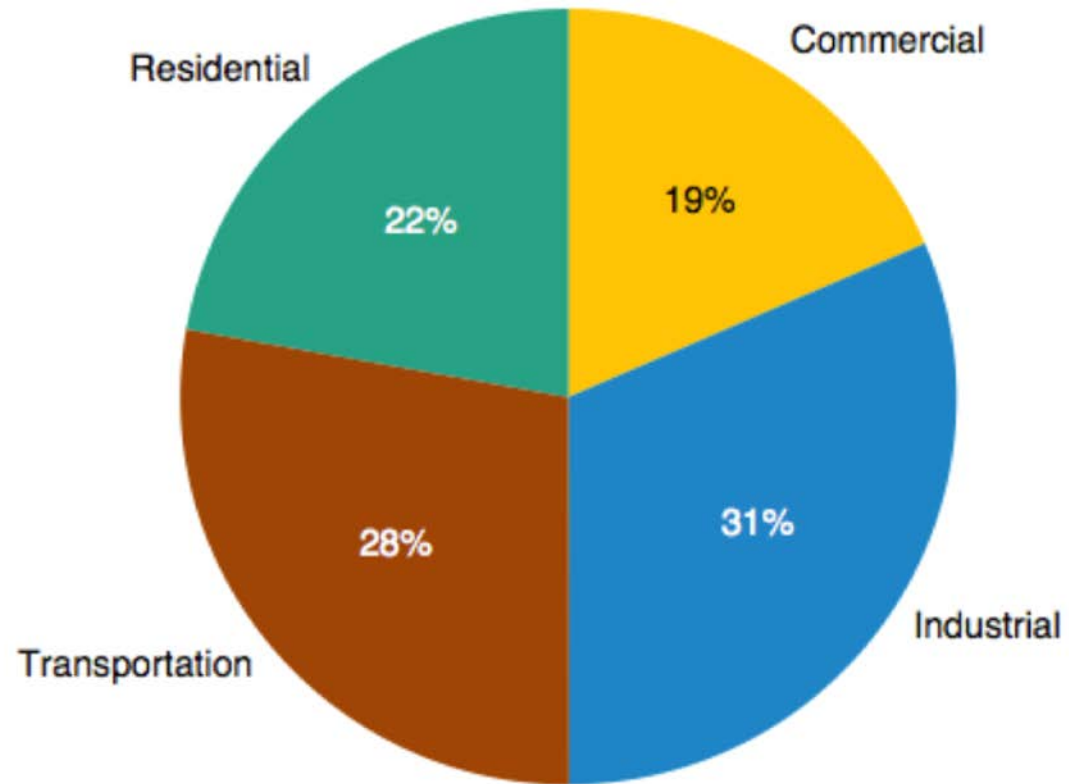
Parking at the perimeter

Resident governance



Energy Codes

End-Use Sector Shares of Total Consumption, 2011





Zoning Codes that Impact Energy Use

- Mixed Use Neighborhoods at appropriate density allow walking and biking to destinations
- Reduced length and frequency of vehicle trips
- Allowing shared walls dramatically reduces heat/cooling loss



Energy Codes

Code impacts - Building envelope:

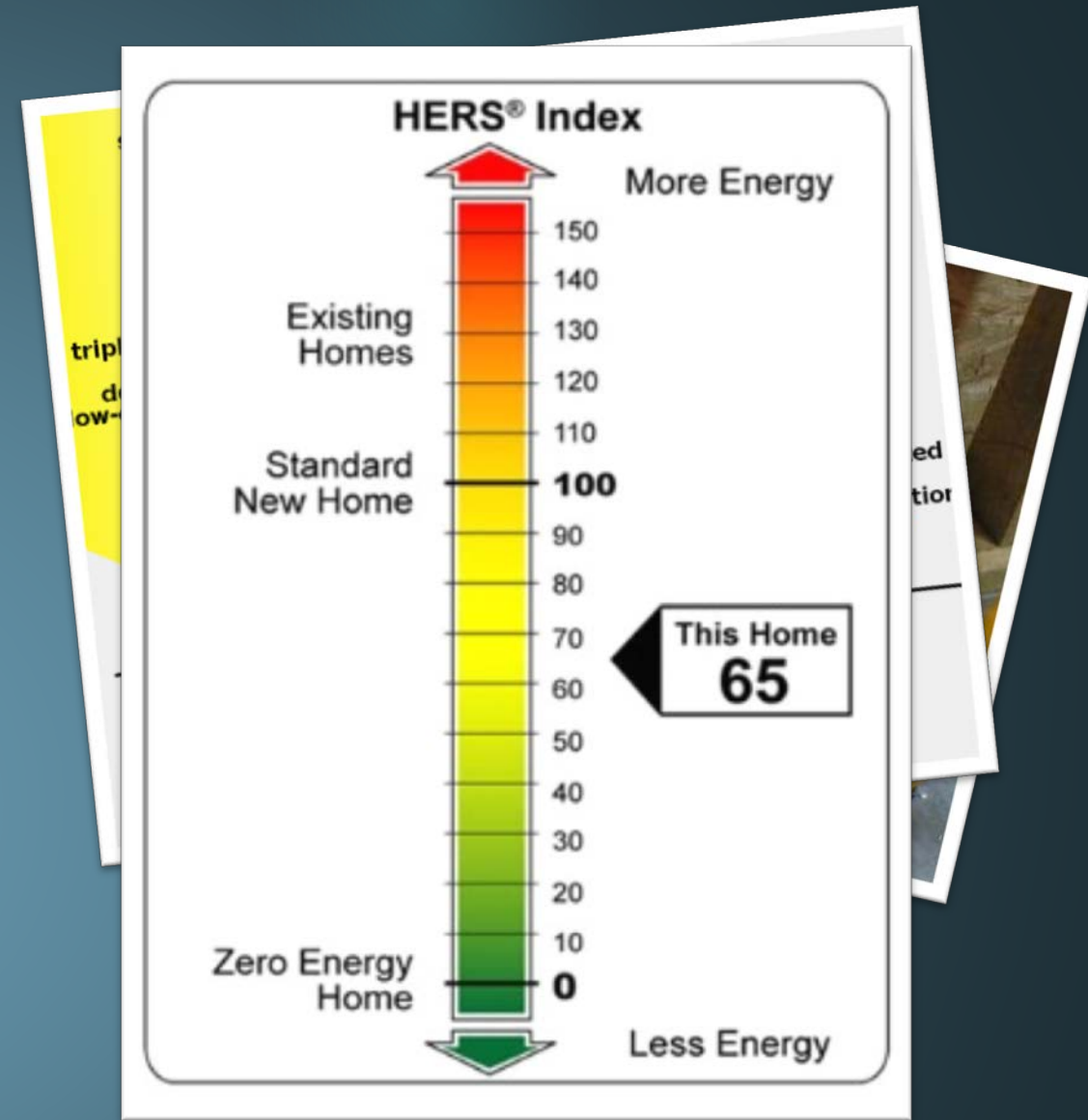
- Building sealing
- Casement windows
- Increased R-values
- Avoiding thermal bridging

Code impacts - Building mechanics:


- Air Quality & Ventilation Needs Increase with envelope sealing – heat exchange captures heat/cooling from exhaust air
- Increased Efficiency of Mechanical Equipment decreases electrical demand
- Efficient plumbing fixtures reduce water use and energy for hot water

Outcome:

Overall energy efficiency standard



Energy Codes

 Cornell University

CHRONICLEONLINE

March 12, 2013

New York's fossil fuel: Gone with the wind ... water and sun

By Blaine Friedlander

Converting all of the state's energy sources from natural gas, coal and fossil fuel to wind, water and sunlight by 2030 will stabilize electricity prices, reduce power demand by about 37 percent and create thousands of permanent jobs, suggests a new report in the journal Energy Policy (March 12, 2013).

"Can New York state rid itself of fossil fuel in the near future? The answer is yes. The economics of this plan make sense; now it is up to the political sphere," says Anthony Ingraffea, Cornell professor of engineering and a co-author on the report.

The report, "Examining the Feasibility of Converting New York State's All-Purpose Energy Infrastructure to One Using Wind, Water and Sunlight," is the first-ever, comprehensive plan for an individual state -- New York -- that provides 100 percent of its all-purpose energy from wind, water and sunlight. Further, it calculates the number of energy devices, land and ocean areas, jobs and policies needed for such an infrastructure. Mark Z. Jacobson of Stanford University is the lead author, and Ingraffea and Robert W. Howarth, Cornell professor of ecology and evolutionary biology, are co-authors.

"New York state has the opportunity to lead the nation and the world toward what we all know must be the energy path of the 21st century," says Howarth. "The only questions have been, how long will it take to get to renewables, and how much will they cost. Here we show it can be done quickly, and at a net economic benefit to the state."



“It's not too late at all. You just don't yet know what you are capable of.”

MAHATMA GANDHI

Opportunity for Free Technical Assistance

Winner will receive approximately \$5,000 in in-kind services, including:

- A visit to the winner's property by team planners and architects
- A guided tour of the *Community That Works* projects in Tompkins County
- A half-day design charrette for the owner and his/her development team
- A written report summarizing the charrette, including a conceptual design plan for the property suitable for use at a sketch plan phase of project review
- A page featuring the project on the website

Ripple Effects:

- ❖ Contest Winner – Troy, NY inner-city neighborhood
- ❖ DOE Building America
- ❖ Landscape Architecture Foundation

Project Team

Liz Walker - liz@ecovillage.ithaca.ny.us

Ed Marx - emarx@tompkins-co.org

Katie Borgella

Rob Morache

Sue Cosentini

Linda Copman

Consultant:

STREAM Collaborative



www.community-that-works.org



welcome
home
community-that-works.org

